

Simulation

Achieving

Quality

Patient Care



SimMan 3G

www.laerdal.com



Laerdal
helping save lives

Simulation

Achieving

Quality

Patient Care



At Laerdal, we believe that simulation training for Healthcare Professionals is pivotal in our common goal to improve patient outcomes.

Simulation provides the opportunity to train staff without risk to patients. The ability to frequently practise and manage complex medical scenarios, helps to prevent medical errors, while detailed feedback promotes discussion and re-enforces the learning process. Simulation will enable your staff to deliver quality patient care with integrity, consistency and confidence.

Laerdal have had five decades of experience creating medical educational products for use by Healthcare Professionals. It is a history and association of which we are proud. Over 9,000 Laerdal patient simulators are currently in use globally, including over 5,000 SimMan.

SimMan 3G is the next generation of Laerdal simulation. Three years in the making, SimMan 3G is a groundbreaking simulation solution. Completely wireless and self-contained, technically advanced and yet so easy to use; there is no patient simulator to rival it.

Your
Needs

Imagine the training benefits of running a complete and continuous medical scenario from the moment of patient injury, at any location, through the challenges of patient transportation and concluding in a hospital; all realistically facilitated by a single patient simulator.



Completely wireless and self-contained, simulation training need no longer be compromised by location and equipment constraints.

Designed using the most cutting-edge technology, SimMan 3G opens up numerous simulation possibilities for variable locations and mobility. Easy to programme, operate and transport; all aspects of medical training can now be challenged simultaneously and gradient levels of difficulty can be applied to each scenario to build student competence. SimMan 3G is compatible with Laerdal's Advanced Video System, which provides comprehensive debriefing support for quality feedback and effective learning.

SimMan 3G

.... leading the way forward.

Making Simulation Easier

- to use

SimMan 3G's intuitive software interfaced with three flexible operating modes, enables novice and expert instructors to create effective simulations more simply and quickly than ever before.

- to operate

Whether you are new to simulation training or just need a quick set up solution, the **Automode** feature is revolutionary in facilitating the most automatic way to operate **SimMan 3G**. It combines physiological models, pre-programmed patient cases and an innovative method for managing model based simulation. Instructors can now take advantage of pre-programmed pharmacological responses for over 108 drugs, repeatedly run the most complex cases with ease and adapt difficulties to challenge the skills of every student.

- to teach

The new improved **Instructor Mode** has been designed for instructors who like to combine their knowledge and skills with pre-programmed scenarios. Utilising **Instructor Mode**

On The Fly gives the more experienced simulation instructor the flexibility to digress at any time. The instructor can now initiate challenges responsively to the needs of each student at any given moment without compromising the flow of the simulation. Exciting features of the Instructor Mode include easy access to the most important vital signs and a new Graphical User Interface (GUI) that makes navigation through the scenario straightforward and effortless.

- to programme

SimMan 3G's powerful scenario editing capability is built on the tried and tested SimMan software including the same flow diagrams, trends, handlers and events. Scenario writing and validation is simple to learn. Once a custom simulation is prepared, it behaves exactly as the instructor needs time after time so that every student can train in the same standardised way. The software can even include images, sounds and multi-media graphics to enhance the learning of students.

Helping you succeed

Laerdal is dedicated to helping you meet and exceed your educational goals. From simulators and scenarios to installation and training; our products and services are designed to help you achieve the optimal training environment with the most realistic outcome possible.



More than a Patient Simulator

SimMan 3G not only operates remotely but can also wirelessly integrate with your existing computer networks. It integrates fully with the complete 'Circle of Learning' intrinsic to all Laerdal products. Video debriefing, patient monitoring, pre-packaged patient cases and scenarios and the Advanced Video System are just some of the accessories that make **SimMan 3G** a complete simulation solution.

Education to help maximise your return

SimMan 3G is available with a comprehensive range of products and services. These include an instructor-training programme from one of our product training specialists either at your location or at our fully equipped Laerdal Training Centre. Additional professional services include advanced programming courses, customised refresher training courses and scenario development services.

Protecting Your Investment

While our simulators are recognised for their quality and reliability, for that extra peace of mind, we also offer technical support services that make it easier for you to own, operate and maintain your programmes including preventative maintenance programmes, extended warranties and an optional Laerdal On-Site Service with our field service technician.

SimMan 3G

.... leading the way forward.



SimMan 3G Built to last

Since the launch of Resusci Anne in 1960, Laerdal's lifelike manikins and patient simulators have helped to train an estimated 300 million medical professionals and lay responders around the world to save lives and improve patient outcomes.

Today, Laerdal is internationally renowned for products that not only go beyond user expectations but work well beyond their normal expected life.

SimMan 3G is a testimony to this tradition. It has been designed to withstand use in the harshest of environments to create realistic scenarios.



Advanced Video System

Improved learning with quality debriefing

The ability to debrief is a critical part of simulation based education. Laerdal's Advanced Video System (AVS) is a tried and tested debriefing system which facilitates feedback and is simple to use.

The AVS system is compatible with a number of Laerdal patient simulators. It allows every detail of a student's management of multiple complications to be captured for audio-visual feedback, data log analysis and patient monitoring, all of which make for valuable, reflective learning.

The AVS can also be integrated into your Simulation Centre's local area network, allowing simulations to be viewed throughout your facility.

Quality Debriefing



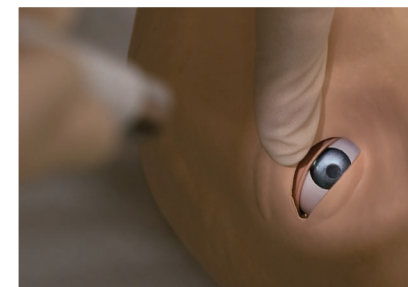
Quality CPR Feedback

Laerdal's Q-CPR technology measures the quality of CPR providing real time feedback on compression rate, depth, release, and hands-off time as well as generating palpable pulses, blood pressure wave forms and ECG artefacts.



Wireless Monitor

Part of the complete wireless simulation solution, the wireless monitor enables you to observe the patient simulator's vital signs while moving around freely during training.



Eye Signs

Include pupillary responses to light, blinks at slow, normal and fast rates, winks and open, partially open and closed reactions.



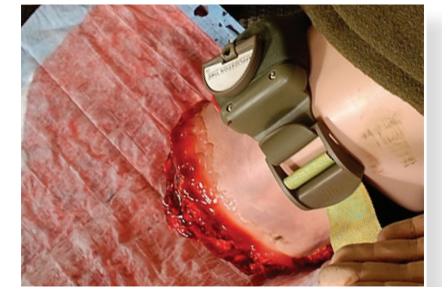
Convulsions

Degrees of seizures and convulsions can be created from minor effect through to a full convulsion through the Instructor Mode.



Secretions

The new eye secretions feature has multiple scenario applications such as responsive reactions to chemical, biological, radiological and nuclear agents.



Bleeding and Wounds

Wound models can be connected to an internal blood reservoir which will bleed both from arterial and venous vessels. Connected to the simulator's physiological modelling, SimMan 3G will react appropriately according to treatment.



Drug & Event Recognition

The new and advanced Drug Recognition System allows students to administer drugs simultaneously. It registers the amount, speed and type of drug automatically and applies the appropriate physiological responses, saving the instructor time and improving the overall intelligent debrief.



Vascular Access

In addition to the standard vascular access in the right arm, the new intraosseous access via the tibia and sternum allows for procedure accuracy.



Chest Decompression & Chest Drain

Students can now perform a needle Thoracentesis and insert a chest drain bi-laterally.

SimMan 3G

.... leading the way forward.

SimMan 3G

- Completely wireless and self-contained
- Internal electrical and pneumatic power
- Supplemental wired connectivity and power
- Wirelessly integrates with existing computer networks
- Swappable, rechargeable batteries
- Approximately 4 hours continuous operation in wireless mode
- Rugged and reliable for use in multiple environments

Multiple Airway Skills/Features:

- Controllable open/closed airway; automatically or manually controlled
- Head tilt/Chin lift
- Jaw thrust w/articulated jaw
- Suctioning (Oral & Nasopharyngeal)
- Bag-mask ventilation
- Orotracheal intubation
- Nasotracheal intubation
- Combitube, LMA, and other airway placement
- Endotracheal tube intubation
- Retrograde intubation
- Fiberoptic intubation
- Transtracheal jet ventilation
- Needle cricothyrotomy
- Surgical cricothyrotomy
- Variable lung compliance – 4 settings
- Variable airway resistance – 4 settings
- Right main stem intubation
- Stomach distention
- Connectivity with third party respiratory simulations

Airway Complications:

- Detection of proper head position
- Can't intubate/Can ventilate
- Can't intubate/Can't ventilate
- Tongue edema
- Pharyngeal swelling
- Laryngospasm
- Decreased cervical range of motion
- Trismus

Breathing Features:

- Simulated spontaneous breathing
- Bilateral and unilateral chest rise and fall
- CO₂ exhalation
- Normal and abnormal breath sounds
 - 5 anterior auscultation sites
 - 6 posterior auscultation sites
- Oxygen saturation and waveform

Breathing Complications:

- Cyanosis
- Needle thoracocentesis – bi-lateral
- Unilateral & Bilateral chest movement
- Unilateral, Bilateral & lobar breath sounds
- Chest tube insertion - bilateral

Cardiac Features:

- Extensive ECG library
- Heart sounds – four anterior locations
- ECG rhythm monitoring (4 wire)
- 12 lead ECG display
- Defibrillation and cardioversion
- Pacing

Circulation Features:

- BP measured manually by auscultation of Korotkoff sounds
- Carotid, femoral, brachial, radial, dorsalis pedis, popliteal and posterior tibialis pulses synchronized with ECG
- Pulse strength variable with BP
- Pulse Palpation is detected & logged

Vascular Access:

- IV access (right arm)
- Intraosseous access (tibia and sternum)
- Automatic Drug Recognition System

CPR:

- Compliant with 2005 Guidelines
- CPR compressions generate palpable pulses, blood pressure wave form, and ECG artefacts
- Realistic compression depth and resistance
- Detection of depth, release and frequency of compressions
- Real time feedback on quality of CPR

Eyes:

- Blinking - slow, normal, fast and winks
- Open, closed and partially open
- Pupillary accommodation:
 - synchrony/asynchrony
 - normal and sluggish speed of response

Other Features:

- Seizure/Fasciculation
- Bleeding
 - Simulation of bleeding at multiple sites
 - Arterial and venous
- Vital signs automatically respond to blood loss & therapy
- Works with various wound modules & moulage kits
- Urine output (variable)
- Foley catheterization
- Secretions
 - Eyes, Ears, Nose, Mouth
 - Blood, Mucous, CSF, etc.
- Diaphoresis
- Bowel Sounds – four quadrants
- Patient Voice
 - Pre-recorded sounds
 - Custom sounds
 - Instructor can simulate patient's voice wirelessly
- Instructor Communication
 - Multiple instructors communicate using integrated voice over IP

Pharmacology:

- Automatic Drug Recognition System identifies drug & dose
- Extensive drug formulary
- Automatic or programmable physiological responses

System Features:

- Wireless tablet PC controls simulator remotely
- Control multiple manikins from one interface
- Control simulations from anywhere on your network
- Multiple interfaces can control/observe a single simulation

- Instructor Mode
 - Precise control "on the fly"
 - Design & program custom scenarios
 - Create custom events
 - Run pre-packaged scenarios
- Auto Mode
 - Physiological & pharmacological models run pre-packaged simulations
 - Unique, simple controls increase/decrease difficulty & pace
- Simulation controls:
 - Fast forward
 - Pause
 - Rewind
 - Save/Restore
- Profile Editor
- Future prediction & patient outcome display
- Integrated video debriefing
- Data logging
- Instructor comments
- Works with existing SimMan scenarios

Patient Monitor:

- Wireless
- Highly configurable
- Includes:
 - ECG (2 traces)
 - SpO₂
 - CO₂
 - ABP
 - CVP
 - PAP
 - PCWP
 - NIBP
 - TOF
 - Cardiac Output
 - Temperature (core & peripheral)
 - Additional and programmable parameters
- X-Ray Display
- 12 Lead ECG Display
- Custom Image Display
- Custom Video Display

Certifications:

- UL, CE, FCC, CSA, HMR

SimMan 3G includes:

- SimMan 3G Manikin
- SimMan 3G Software & License
- Operator's Tablet PC
- Simulated Patient Monitor and Software
- Simulated Patient Cables
- Webcam
- Drug Recognition Kit
- Soft Sided Transportation Cases
- Specially Designed Clothing
- 10 SimMan 3G Patient Cases for AutoMode
- 1 Year Manufacturer's Warranty

Accessories:

- Simulated Patient Monitor & Software (Large screen, Panel PC w/power cord)
- Hard Sided Transportation Case - Rugged and weatherproof
- Operator's Remote Control (Ultra Slim Tablet PC)
- Advanced Video System
- Wound Modules and Moulage Kits
- Tablet PC Accessory Kit (Monitor, Keyboard, Mouse & Docking Station)
- Portability Kit
- Compressor

Scenario Packages:

- SimMan3G Patient Cases: Volume II – for Automatic Mode
- SimMan National League for Nursing Scenarios: Volume I – for Instructor Mode

- SimMan AHA ACLS Scenarios – for Instructor Mode
- SimMan MicroSim Scenario Package – for Instructor Mode
- SimMan Disaster Preparedness Scenarios: Volume I - for Instructor Mode

Service Packages*:

- Two Day Introductory Training Course
- Advanced Scenario Programming Course
- Custom One Day Training Package
- Custom Scenario Development Package
- On Site Installation
- Extended Warranty
- Preventative Maintenance
- Loaner Programme

* services available may differ between countries

For more product information, please visit www.laerdal.com



Laerdal
helping save lives

Simulation for advanced life support programs



ALS Simulator

The simulator for advanced life support training programs

The Advanced Life Support Simulator is a realistic interactive training manikin or simulating a wide range of advanced lifesaving skills in medical emergencies. The simulator responds to clinical intervention, instructor control, and comprehensive pre-programmed scenarios for effective practice of diagnosis and treatment of a patient. With spontaneous respirations, airway control, voice, sounds, ECG, and many other clinical features, the ALS Simulator is the fully functional emergency care simulator.

- **Educationally effective** for teaching advanced lifesaving skills, communication, and teamwork through simulation
- Efficiently **targets key skills** of emergency care providers
- **Mobile** for use in field, transport and hospital trainings
- **Cost effective** for incorporating patient simulation into training program
- **Preprogrammed scenarios** provide standardized training, while customizable scenarios and real-time instructor control allows the flexibility to meet individual student needs



ALS Simulator Product Features

Manikin and Airway Features

Interchangeable pupils (normal, blown and constricted)
Endotracheal intubation
Nasotracheal intubation
Digital intubation
Oropharyngeal and Nasopharyngeal airway insertion
Bag-Valve-Mask ventilation
Retrograde and Lightwand intubation
Laryngeal Mask Airway insertion
Combitube insertion
Trans-Tracheal Jet ventilation
Surgical and needle cricothyrotomy
Suctioning techniques
Obstructed airway
Pneumothorax decompression and chest tube insertion
Tongue Edema
Stomach auscultation to verify positioning
Head Tilt / Chin Lift
Modified Jaw Thrust
Spontaneous chest rise and fall

Circulatory Skills and IV Drug Administration

Articulating IV Arm with replaceable skin and infusible vein system allows peripheral intravenous therapy and site care

Subcutaneous and intramuscular injection sites

Cardiac Related- VitalSim

1400+ cardiac rhythm variations
Manual chest compressions
Programmable waiting rhythms
Programmable scenario base algorithms for instructor control
3- or 4- lead ECG, pacing and defibrillation using standard clinical equipment
Pacing with programmable threshold for capture

Blood Pressure / Pulses - VitalSim™

Articulating blood pressure arm for auscultated and palpated blood pressure simulation
Korotkoff sounds
Systolic and diastolic pressure may be set individually
Auscultatory gap
Bilateral carotid pulses and brachial and radial pulses in the BP arm
- Pulses synchronized with programmable ECG
- Pulse strengths dependent on BP

Sounds - VitalSim™

Heart sounds synchronized with programmable ECG
Lung sounds synchronized with breathing rate
Individual lung or bilateral sound selection
Normal and abnormal bowel sounds
Pre-recorded and live feed voice sounds

Logging / Scenario Function

Sensored Events Include:
- Airway opened via Head Tilt / Chin Lift or Modified Jaw Thrust
- Pulse check
- Ventilations Started / Stopped
- Compressions Started / Stopped
- Defibrillation
- Pacing
Customizable events for logging specialized learning objectives
PC scenario editor for creating and editing user defined and pre-programmed scenarios
Student logs can be stored and downloaded for post training review and debriefing

Computer Specs

Must operate on Windows 2000 or higher

Optional Accessories

381500	Trauma Modules
375-81001	Arterial Stick Arm
381655	Hard Carry Cases
381450	Nursing Wound Modules
276-15001	NBC Module
276-16001	Small Pox Modules
210-00550	Forced Air Bleeding Control System
1005112S	Genitalia Kit-Male and Female

205-05050 ALS Simulator
200-100XX VitalSim™ Control Unit*

**Denotes Language version*

ALS Simulator Includes:

Adult, Full-body Simulator; Interchangeable Pupil Set, (6) Neck Skin Collars, 1 Roll Cricothyroid Membrane Tape, Set of Replacement Pneumothorax Bladders, (6) Chest Drain Modules, Air Pump, Set of Defibrillation Posts, Jacket, Pants, Directions for Use, Software CD, Learning Materials and Manikin Lubricant.



For more product information, please visit www.laerdal.com

USA and Latin America:

Laerdal Texas
P.O. Box 38-226 FM 116
Gatesville, Texas 76528
(888) 297-7772 or
(254) 865-7221
FAX (800) 865-8011
www.laerdal.com

Laerdal Medical Corporation
167 Myers Corners Road
Wappingers Falls, NY 12590
(800) 431-1055 or
(845) 297-7770
FAX (800) 227-1143
www.laerdal.com

Canada:

Laerdal Medical Canada Ltd.
151 Nashdene Rd., Unit #45
Toronto, ON M1V 4C3, Canada
(416) 298-9600 (888) LAERDAL
FAX (416)-298-8016
savelives@laerdal.ca



Laerdal®
helping save lives



Laerdal®
helping save lives



Improving Survival Rate is a Lifelong Commitment

Resusci Anne® QCPR®

More than 300 million people worldwide have been trained using our bestselling Resusci Anne® manikin. The new **QCPR® Technology** enables objective CPR performance measurement and logging of sessions for post-training debriefing.

Use Resusci Anne QCPR together with SkillGuide™ for real-time, single session feedback, or with SimPad® SkillReporter™ software for a comprehensive overview of up to six manikins simultaneously.

laerdal.com



Visit us for a comprehensive list
of Resusci Anne QCPR features

Resusci Anne® QCPR®

QCPR® Technology

Laerdal's QCPR Technology, part of the new Resusci Anne® and Resusci® Baby manikin line, enables our manikins and feedback devices to measure the quality of CPR, providing real-time and summative feedback on compression rate, depth, release, hands-off time and other critical components of high-quality CPR as defined in the American Heart Association Consensus Statement*.

FEATURES:

- Realistic anatomy including head tilt, chin lift, compression depth, compression force and chest rise
- Sensor indicates correct hand placement
- Ventilation system provides appropriate chest rise with BVM (Bag Valve Mask) and MTM (Mouth to Mouth)
- Enhanced feedback devices:
 - SkillGuide
 - SimPad SkillReporter
 - Wireless SkillReporter Software (for PC)
- Guidelines compliant
- Optional components
 - AED training
 - CPR-D training
 - First aid and extrication limbs
 - Airway Head for supraglottic airway management techniques

170-30050 SkillGuide
202-30001 SimPad SkillReporter

SkillGuide and SimPad SkillReporter ordered separately.

Resusci Anne for First Aid (no electronics)

170-00150 Torso
170-01250 Full Body

Accessories and Consumables

312050 First Aid/Trauma module
152250 Airways (pkg. 24)
310210 Adult Manikin Faces (pkg. 6)
152400 Manikin Wipes (pkg. 50)
15120103 Manikin Face Shields (6 rolls of 36 each)

ORDERING INFORMATION:

Resusci Anne QCPR

171-00150 Torso
171-01250 Full Body
172-00150 Torso with Airway Head
172-01250 Full Body with Airway Head
173-00150 AED Torso
173-01250 AED Full Body
174-00150 AED Torso with Airway Head
174-01250 AED Full Body with Airway Head
176-00150 CPR-D Torso with Airway Head
176-01250 CPR-D Full Body with Airway Head



Wireless SkillReporter™ Software
(PC not included)



SimPad®
SkillReporter™

SkillGuide™



Laerdal®
helping save lives

For more information, visit laerdal.com

* Meaney PA, Bobrow BJ, Mancini ME, Christenson J, de Caen AR, Bhanji F, Abella BS, Kleinman ME, Edelson DP, Berg RA, Aufderheide TP, Menon V, Leary M; on behalf of the CPR Quality Summit Investigators, the American Heart Association Emergency Cardiovascular Care Committee, and the Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation. Cardiopulmonary resuscitation quality: improving cardiac resuscitation outcomes both inside and outside the hospital: a consensus statement from the American Heart Association. *Circulation*. 2013;128:417-435

CVC Insertion Simulator II

- Ultrasound guided CVC with reality.
Training with anatomical understanding.
- Axillary vein approach as well as internal jugular vein approach.
An introductory training block to acquire basics of ultrasound guided puncture.
Excellent image quality.
- Improved stain free body torso shows the anatomy of the heart for further anatomical understanding.

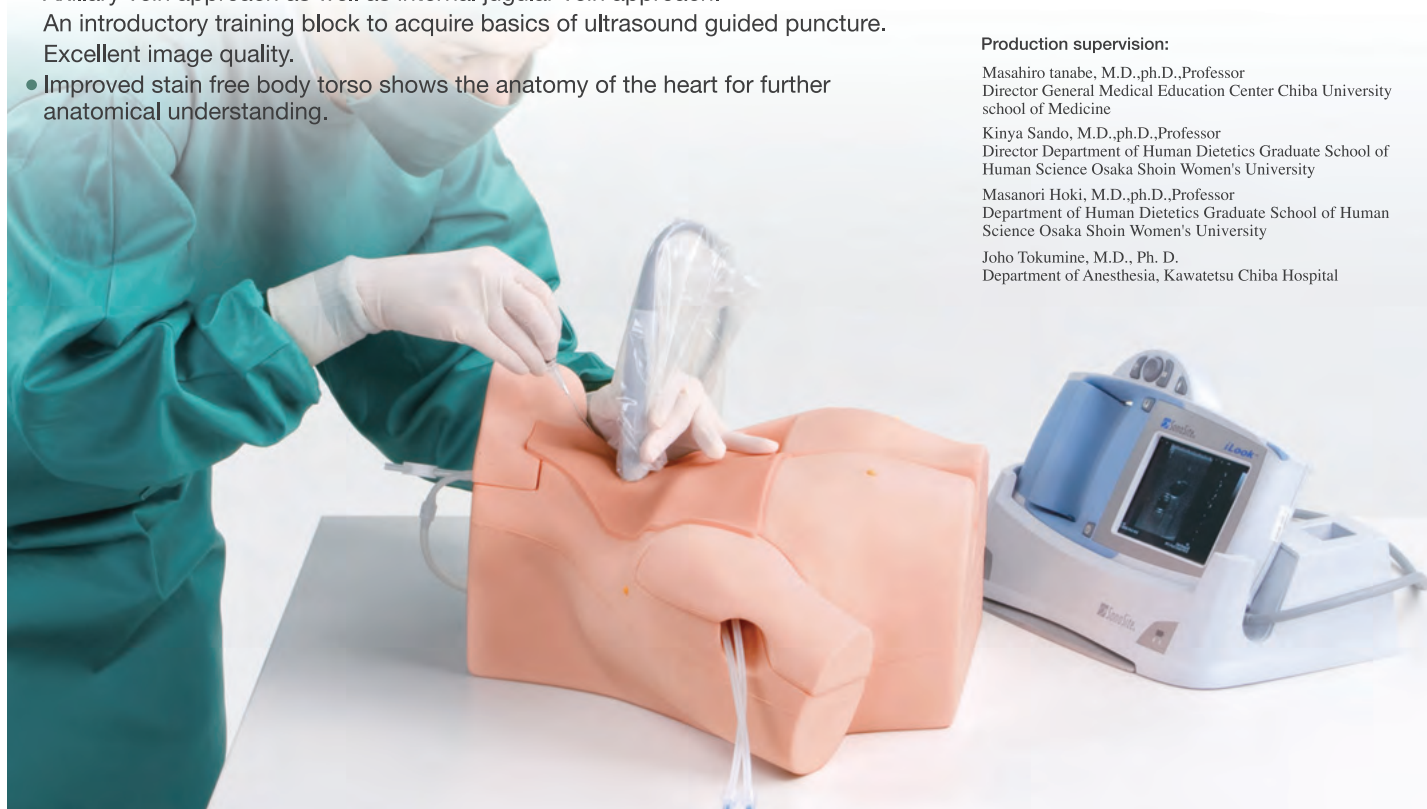
Production supervision:

Masahiro tanabe, M.D.,ph.D.,Professor
Director General Medical Education Center Chiba University
school of Medicine

Kinya Sando, M.D.,ph.D.,Professor
Director Department of Human Dietetics Graduate School of
Human Science Osaka Shoin Women's University

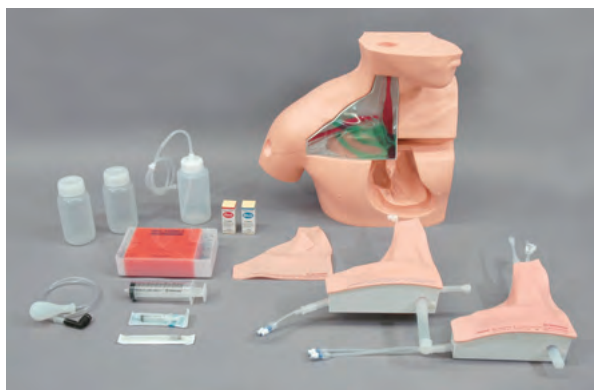
Masanori Hoki, M.D.,ph.D.,Professor
Department of Human Dietetics Graduate School of Human
Science Osaka Shoin Women's University

Joho Tokumine, M.D., Ph. D.
Department of Anesthesia, Kawatetsu Chiba Hospital



Learning from making mistakes; various complications can be simulated.

Effective for cannulation training; the only simulator with anatomically correct junctions of the subclavian veins with the right internal jugular and SVC.
(Landmark pad and Transparent anatomical block)



CVC Insertion Simulator II M93UB

Set includes:

1 male upper torso manikin	1 air bulb
1 landmark puncture pad	2 plastic jars
1 ultrasound puncture pad	1 irrigation bottle
1 transparent anatomical block	1 syringe
1 introductory ultrasound training block	1 sample syringe
1 skin for cannulation training	1 sample needle
1 red coloring powder	
1 blue coloring powder	
	manikin size: 40 x 41 x 21 H cm, 2.2 kg
	packing size: 52 x 46 x 39 H cm, 9 kg

Replacement parts

- 11347-119 landmark puncture pad (a set of 2)
- 11347-170 ultrasound puncture pad (a set of 2)
- 11347-210 introductory ultrasound training block (a set of 2)

Specifications are subject to change.

KYOTO KAGAKU

15 Kitanekeya-cho, Fushimi-ku, Kyoto, 612-8388, JAPAN
Tel: +81-75-605-2510 Fax: +81-75-605-2519
www.kyotokagaku.com
rw-kyoto@kyotokagaku.co.jp

Introductory

Landmark Techniques

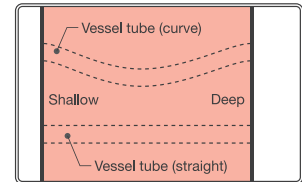
Transparent anatomical block



Anatomical understanding and pre-training for catheterization.

Ultrasound Guided Venous Access

Ultrasound training block



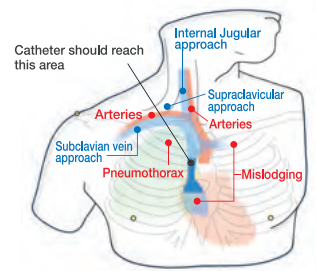
Skills trainings

Landmark Techniques

Landmark puncture pad



Three methods of CVC approaches are possible with Landmark pad.



Palpation

Palpable landmarks and carotid arterial pulsation



Puncture and confirmation

True-to-life needle tip resistance

Success and failure confirmation
Success: blue fluid
Arterial puncture: red fluid
Pneumothorax: air collection



Cannulation

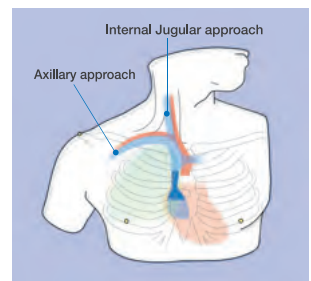
(Guide wire insertion)
Anatomically correct venous bifurcation

Success and failure confirmation
Left subclavicular and heart window shows successful / failure insertion.

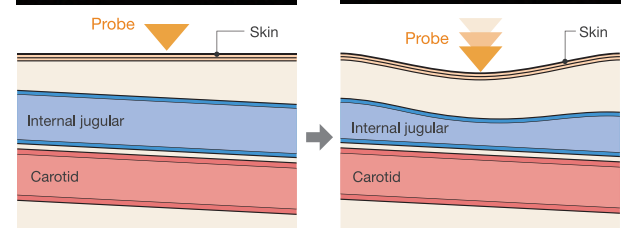
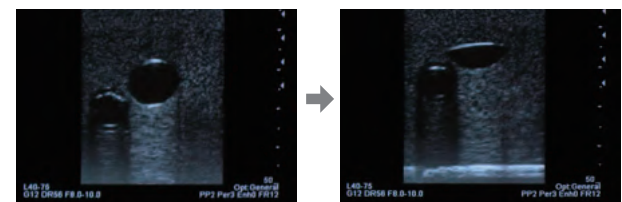
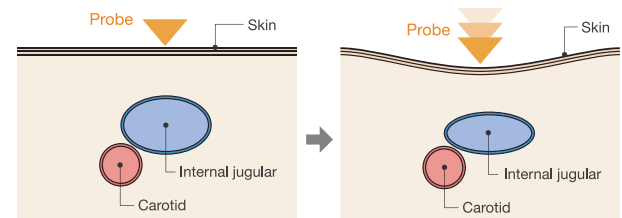


Ultrasound Guided CVC

Ultrasound puncture pad



Realistic venous collapse



Ultrasound-Guided Thoracentesis / Pericardiocentesis Simulator

MW17

Product Supervision

Takahiro Amano, M.D.
Vice President
Senior Vice-Dean, Postgraduate School
Professor and Director, Center of Postgraduate Medical Education
International University of Health and Welfare
Honorary Director, Sanno Medical Center

Both puncture skills training in 1 model.



1 Thoracentesis



2 Pericardiocentesis



Ultrasound-Guided Thoracentesis Simulator - Strap-on set -

MW4A

Product Supervision

Takahiro Amano, M.D.
Vice President
Senior Vice-Dean, Postgraduate School
Professor and Director, Center of Postgraduate Medical Education
International University of Health and Welfare
Honorary Director, Sanno Medical Center

Ultrasound-Guided Thoracentesis Simulator features strap-on (wearable) puncture units that facilitate hybrid training sessions with SPs.

Features

1. Excellent ultrasound image.
2. Ribs can be palpated.
3. Realistic needle-tip resistance and needle-penetrating feeling.
4. Simulation of risks of complications.
5. Puncture pads can be strap-on for learning patient positioning and face-to-face communication.



Set Includes List for MW4, MW15, MW17, MW4A

	MW4 Thoracentesis	MW15 Pericardiocentesis	MW17 Full-set	MW4A Strap-on-set					
1 adult chest model with spacer	○	○	○		Accessories				
1 mid-axially line unit (container with organs, puncture pad and straps)	○		○	○	-1 irrigator	○		○	
1 mid-scapular line unit (container with organs, puncture pad and straps)	○		○	○	-1 funnel	○		○	○
1 puncture pad for pericardiocentesis		○	○		-1 50 ml syringes	○	○	○ _{x2}	○
1 pillow for positioning	○	○	○		-1 joint hose		○	○	
1 explanation model for thoracentesis	○		○		-1 tube with three-way stopcock	○		○	○
1 instruction manual	○	○	○	○	-1 prastic jar	○		○	○

Difficult Airway Management Simulator -Training Model-

MW13



Difficult Airway Management Simulator offers unprecedented experience in DAM training with wide varieties of settings. Accurate anatomy and realistic feeling of airway will meet requirements of all levels of trainees.

Features

1. 24 variations of patient scenario (including 1 normal case): 3 stages of mouth opening, 2 stages of neck flexibility, 2 tongue sizes and 2 positions of the vocal cord.
2. The incisors are removable when excessive force is applied.

Training Skills

- Airway opening techniques (head tilt, jaw thrust)
- Bag-Valve-Mask ventilation
- Pre-intubation airway assessment
- "Sniffing position"
- Pressurization of external larynx to improve the laryngeal view
- Intraoral/Intranasal Intubation
- Use of oropharyngeal airway (OPA)
- Use of nasopharyngeal airway (NPA)
- Use of laryngeal mask airway
- Use of video laryngeal scope
- Confirmation of successful ventilation by:
 - observation of thoracic and abdominal movement (lung expansion, stomach inflation) or
 - auscultation of the chest
- Feedback of incorrect procedures including esophagus intubation and unilateral intubation
- Securing the tube in place with tape or Thomas™ endotracheal tube holder

Set Includes ••••• Manikin Size ••••• Replacement Parts •••••

- 1 manikin
- 3 upper incisors
- 1 lubricant
- 1 syringe
- 1 carrying bag
- 1 instruction manual

W70 x D39 x H25 cm

- | | |
|-------------------|-----------------------|
| 11392-010 | 11392-030 |
| 10 upper incisors | 2 replacement tongues |
| 11392-020 | 11392-050 |
| 1 face mask | 5 pair of lungs |
| 11392-040 | 11392-060 |
| 1 chest cover | 5 stomachs |

Variation of DAM Setting



Neck flexibility (Life-like jaw movement)

- Normal
- Rigid



Mouth Opening

- Normal
- Intermediate
- Difficult



Tongue

- Normal
- Swollen



Laryngospasm

- Normal
- Laryngospasm

Variation of DAM Training



Airway Opening Techniques

True-to-life articulation allows for head-tilt/chin-lift and jaw-thrust techniques.



Intraoral Intubation with Laryngoscope

Once the head is set at "sniffing position", intubation with laryngoscope can be performed.



Confirmation of Tracheal Tube Placement

The placement of the tube can be confirmed by auscultation or movement of thoracoabdominal area.



A Variety of Possible Airway Skills

Intubation with a laryngoscope, BVM ventilation, nasal intubation, Laryngeal mask ventilation, and use of a video laryngoscope

Training in Emergency, Pre-Hospital and Clinical Settings

Manufactured with a robust structure and stable base for training in various settings, including pre-hospital scenarios.



Optional Part

11384-100
bronchofiberscopy training unit
(available for purchase)



www.kyotokagaku.com

Recommended Devices

macintosh laryngoscope:
blade size 3, 4

tracheal tube: internal diameter
7.0mm, 7.5mm

laryngeal mask
-Air-Q: size 3.5
-LMA Supreme: size 4
-I-gel: size 4

rw-kyoto@kyotokagaku.co.jp

Difficult Airway Management Simulator

Demonstration Model



Compact table-top design, anatomical accuracy and a variety of DAM settings. Ideal for demonstration of skills and devices.

Features

1. Anatomically correct airway
2. The upper front teeth are removable when excessive force is applied.
3. Successful tube tip placement can be confirmed by indicators.

Training Skills

- Airway opening techniques (head tilt, jaw thrust)
- Bag-Valve-Mask ventilation
- Pre intubation airway assessment
- "Sniffing position"
- Pressurization of external larynx to improve the laryngeal view
- Intraoral/Intranasal Intubation
- Use of oropharyngeal airway (OPA)
- Use of nasopharyngeal airway (NPA)
- Use of laryngeal mask airway
- Use of video laryngeal scope
- Use of tracheal intubation fiberscope
- Confirmation of successful ventilation by indicators.
- Feedbacks on incorrect procedures including esophagus intubation and unilateral intubation
- Securing the tube in place with tapes or Thomas™ endotracheal tube holder

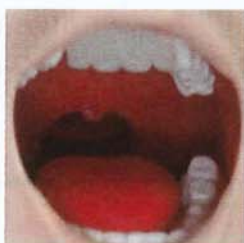
24 variations (includes 1 normal case) of settings by combinations of:
2 steps of neck exibility, 3 steps of mouth opening, 2 sizes of tongues and 2 positions of vocal codes



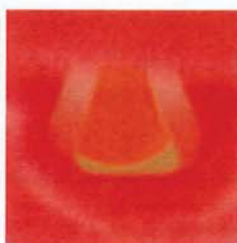
Rigid



Difficult



Swollen



Laryngospasm

- Size
17.7 x 7.9 x 9.8 (in)

- Set Includes
1 manikin
3 upper incisors
1 lubricant

Replacement Parts

- 11393-010
face mask
- 11392-030
replacement tongue
- 11392-010
upper incisors

Recommended Sizes of Devices

- Macintosh laryngoscope:
blade size 3, 4
- Tracheal tube: internal diameter
7.0mm, 7.5mm
- Laryngeal Mask
-Air-Q : size 3.5
-LMA Supreme: size4
-I-gel : size 4

The POWERHEART® AED G3 Plus

Our flagship automated external defibrillator, complete with RescueCoach™ and CPR metronome to pace chest compressions

Appropriate Locations

- Work places
- Transportation
- Sporting venues
- Schools
- Retail & hotels
- Recreation facilities
- Places of worship
- Any public place

Primary Benefits

Reliability. The device is Rescue Ready®, meaning it self-tests daily to ensure it works when you need it.

Ease of Use.

- The RescueCoach™ voice prompts and metronome guide you through a very stressful rescue situation.
- The device knows when to (and when not to) deliver the shock.
- The text screen lends extra help in noisy and chaotic environments.

Assurance. The unit has a 7-year warranty and a 4-year full battery replacement guarantee.



Rescue Ready® performance sets Powerheart AEDs apart

Our Rescue Ready technology distinguishes us among competitors.

- + Every day, to ensure anytime functionality, the AED self checks all main components (battery, hardware, software, and pads).
- + Every week, the AED completes a partial charge of the high-voltage electronics.
- + Every month, the AED charges the high-voltage electronics to full energy.

If anything is amiss, the Rescue Ready status indicator on the handle changes from green to red and the device will emit an audible alert to prompt the user to service the unit. In sum, a Powerheart AED is Rescue Ready when a life depends on it.

Most anyone can operate a Powerheart AED G3 Plus

In the chaos that follows sudden cardiac arrest, concerned but untrained people are hesitant to intervene. Will they know what to do? There's a life on the line!

We designed the Powerheart AED G3 Plus with RescueCoach™ voice prompts to talk rescuers through the steps.

- + When the rescuer applies the pads, the device analyzes the heart rhythm and “knows” when to deliver (or not deliver) the shock.
- + The shock is delivered automatically, with no button to push, and no human intervention. (We also make a semi-automatic version.)
- + After the shock, the unit prompts for CPR with a built-in metronome that sets the pace for proper chest compressions.

In a University of Pennsylvania simulated rescue study, the AED G3 Plus helped untrained adults deliver CPR of a quality similar to that of trained professionals.¹

¹ Peer reviewed study by Benjamin S Abella et. al. “Untrained Volunteers Perform High Quality CPR When using an Automatic External Defibrillator with a CPR Voice Prompting Algorithm,” *Circulation*. 2007; 116:II_437.

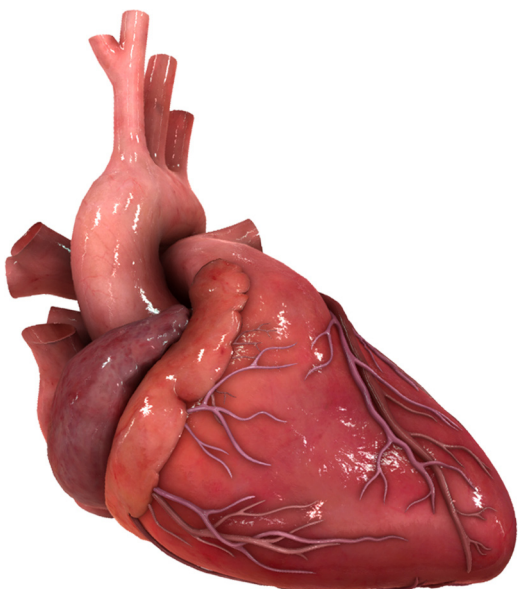
The POWERHEART® AED G3 Plus

TECHNICAL SPECIFICATIONS	
DEFIBRILLATOR Operations Waveform Allowable Energy Range (J) Protocols Factory default (nominal) Voice prompts CPR prompts Text screen Visible indicators Audible alerts Synchronized shock Pacemaker pulse detection Programable Pediatric capability Warranty	9390A (fully automatic version) and 9390E (semi-automatic version) STAR® biphasic truncated exponential Escalating Variable Energy (VE) 95J to 351J 5 energy protocols available 200VE, 300VE, 300VE RescueCoach voice instructions guide user confidently through rescue process Metronome for compression frequency, available with compressions-only CPR or CPR with rescue breaths Displays rescue prompts to guide user through rescue process as well as additional critical rescue information for EMS responders Rescue Ready status indicator, SmartGauge battery status indicator, service indicator, PAD indicator, text display Voice prompt, system alert Built-in automatic synchronization feature Yes Yes, via MDLink® Yes 7 years
PADS Minimum combined surface area Extended length of lead wire Supplied Type Shelf life	228 cm ² (35.3 sq in) 1.3 m (4.3 ft) Self-checking, pre-connected to the AED Adult, pre-gelled, self-adhesive, disposable, non-polarized (identical pads can be placed in either position) defibrillation pads 2 years
BATTERY Type Guarantee	IntelliSense® lithium battery 4-year, full operational replacement
AUTOMATIC SELF-TESTS Daily Weekly Monthly	Battery, pads (presence and function), internal electronics, SHOCK/CONTINUE button, and software Battery, pads (presence and function), internal electronics, partial energy charge, SHOCK/CONTINUE button, and software Battery, pads (presence and function), internal electronics, full energy charge cycle, SHOCK/CONTINUE button, and software
EVENT DOCUMENTATION Type Internal memory ECG playback Communications Clock synchronization	Internal memory 60 minutes ECG data with event annotation, multiple rescue functionality Viewable via Rescuelink® software via PC Serial port or USB (via adapter) for PC with Windows Rescue event time stamp of event data
DIMENSIONS (H x D x W)	8 cm x 31 cm x 27 cm (3.3 in x 12.4 in x 10.6 in)
WEIGHT	3.1 kg (6.6 lb)
MODEL NUMBERS 9390A-1001 9390E-1001	Powerheart AED G3 Plus Automatic with 2010 AHA/ERC Guidelines protocols Powerheart AED G3 Plus Semi-Automatic with 2010 AHA/ERC Guidelines protocols Each AED package includes (1) defibrillator, (1) IntelliSense battery (9146), (1) pair of defibrillation pads, and (1) Quick Start Tool Kit including CD-Rom with AED Manual, Training Video, Rescuelink and MDLink, and serial communication cable

Cardiac Science Corporation • N7 W22025 Johnson Drive, Waukesha, WI 53186 USA • +1.262.953.3500 • US toll-free +1.800.426.0337 • Fax: +1.262.953.3499 • care@cardiacscience.com
Orders and Customer Care (US and International) • +1.262.953.3500 • US toll-free +1.800.426.0337 • Fax: +1.262.798.8292 • care@cardiacscience.com
Technical Support • (US) Fax: +1.262.798.5236 • technicalsupport@cardiacscience.com • <http://websupport.cardiacscience.com/webchat/> • (International) international@cardiacscience.com
Cardiac Science International A/S • Kirke Vaerloesevej 14, DK-3500 Vaerloese, Denmark • +45.4438.0500 • Fax: +45.4438.0501 • international@cardiacscience.com
United Kingdom • The Manse, 39 Northenden Road, Sale, Manchester, M33 2DH, United Kingdom • +44.161.926.0000 • uk@cardiacscience.com
France • Tech'indus D, 645 rue Mayor de Montricher, 13854 Aix-en-Provence Cedex 3, France • +33.4.42.12.37.91 • france@cardiacscience.com
Central Europe (D, A, CH) • Elisabeth Treskow-Platz 1, 50678 Köln, Germany • +49.221.337745.90 • centraleurope@cardiacscience.com
China • 6/F South Building, 829, Yi Shan Road, Shanghai 200233, China • +86.21.6495.9121 • china@cardiacscience.com



**HeartWorks Virtual 3D Heart
Transesophageal Echocardiography Simulator
Transthoracic Echocardiography Simulator**



www.heartworks.me.uk

!ML
INVENTIVE
MEDICAL Ltd.

Introduction

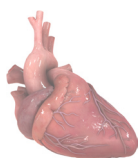
Inventive Medical Ltd. has developed HeartWorks over the past 5 years. At the core of the system is a computer-generated, animated 3D model of the normal human heart which has unrivalled qualities of accuracy and interactivity.

Progression from this point has led to high fidelity ultrasound simulation, both virtual and manikin-based, for transthoracic and transesophageal echocardiography.

With the addition of measurement tools and a student assessment package, HeartWorks will provide a comprehensive and effective teaching tool for all clinicians, from medical students to cardiologists, who share the need for an understanding of cardiac anatomy and echo imaging.

“It is exciting, one of the very best I have seen for some years. It shows the anatomy and function of the heart very accurately and is what you expect to see. This will have great impact on managing patients. This is just wonderful..”

Professor Sir Magdi Yacoub
Professor of Cardiac Surgery



HEARTWORKS
www.heartworks.me.uk

- Echocardiography Training Tool
- Developed by practising doctors
- Anatomically accurate 3D heart
- Real-time ultrasound simulation

!ML
INVENTIVE
MEDICAL Ltd.

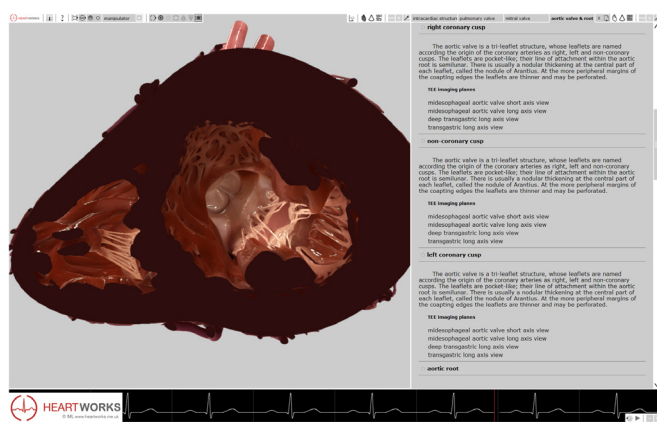
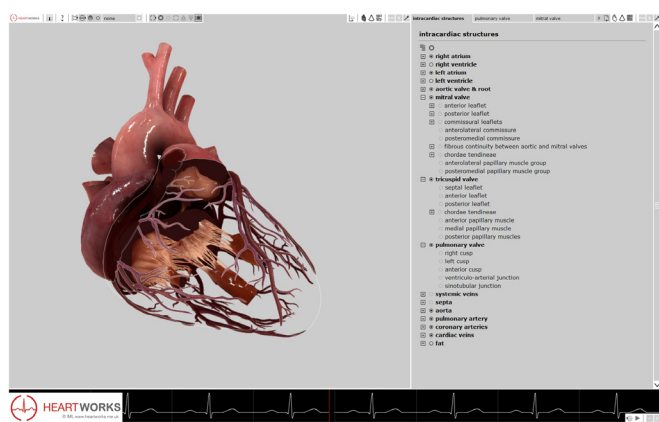
Anatomy Package

This product is a freely interactive computer generated model of the human heart with unprecedented anatomical detail and realism. The heart has been carefully animated to simulate the normal human cardiac cycle and is accurately synchronized to an EKG trace.

The beating heart is freely controlled by the computer keyboard and mouse; it can be viewed from any angle both internally and externally and through a range of zoom. It can be rotated around any axis and sliced in any plane to allow maximal flexibility in the display of cardiac structures.

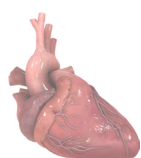
Incorporated into the system is a comprehensive anatomy text with over 150 separate intracardiac structures labelled and described. Any selected structure can be simultaneously highlighted in the text and displayed within the 3D model. A number of predefined areas of the heart can be displayed separately or in combination to demonstrate anatomical relationships. The arrangement of the display windows on the screen can be adjusted by the operator according to personal preference.

Selected screen displays, still or animated, may be stored as slides, with impressive automatic transition between images within a slideshow. All image output can be displayed on the system monitor or relayed to an external projector to add a dramatic enhancement to lecture presentations.



“The animation of the heart is truly amazing, it’s like working with the real thing. Exquisite.”

Professor Robert Anderson
Emeritus Professor of Cardiac Morphology,
Institute of Child Health, London



HEARTWORKS
www.heartworks.me.uk

- Echocardiography Training Tool
- Developed by practising doctors
- Anatomically accurate 3D heart
- Real-time ultrasound simulation

IML
INVENTIVE
MEDICAL Ltd.

Ultrasound Simulation Packages

Transesophageal echocardiography

This addition to the core anatomical model introduces the facility for real time TEE image simulation from the 3D virtual heart.

In the **Ultrasound Simulator Package** the on-screen introduction of a virtual TEE probe generates simulated ultrasound images that are derived directly and continuously from the 3D model. Ultrasound plane positioning is controlled using the computer keyboard and mouse via screen icons representing the standard flexion, rotation and angulation capabilities of a multiplane TEE probe.

In the **Manikin Simulator Package** a realistic TEE probe with authentic controls inserts into the mouth of a life-size upper-body manikin. With easy USB connection to the computer system, the hand held probe controls the position of the on-screen simulated TEE probe and ultrasound plane.

The 3D model can be set to display the 'cut surface' at the level of the TEE ultrasound plane to further clarify the plane orientation. This mode allows students of TEE to visualize clearly the relationship between the 2D TEE image represented on the screen and the underlying 3D anatomy of the heart. Any structure selected in the 3D model is highlighted in the simulated TEE image, and vice versa, so that the user can easily identify any intracardiac region.

As with the core anatomy package, the arrangement of windows displaying the heart, the TEE image and descriptive text may be adjusted by the user. In this package the slideshow feature incorporates the ability to capture the simulated ultrasound images.

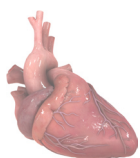
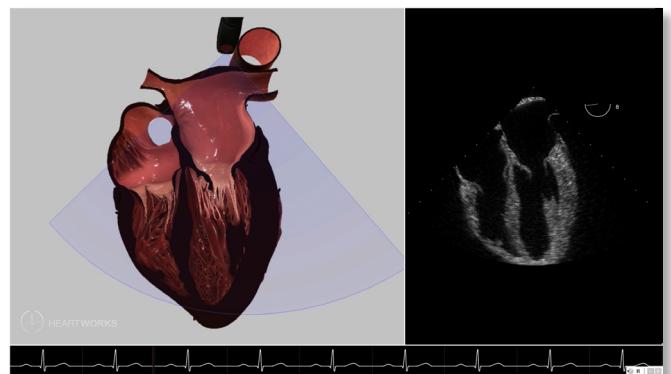
“This powerful learning tool has greatly simplified the understanding of TEE anatomy and image orientation and has the potential to literally change the landscape of TEE training. It is a revolutionary advancement in the field of echocardiography with an enormous potential.”

Dr Feroze Mahmood

Director of Vascular Anesthesia

Beth Israel Deaconess Medical Centre

Harvard Medical School, Boston



HEARTWORKS
www.heartworks.me.uk

- Echocardiography Training Tool
- Developed by practising doctors
- Anatomically accurate 3D heart
- Real-time ultrasound simulation

!ML
INVENTIVE
MEDICAL Ltd.

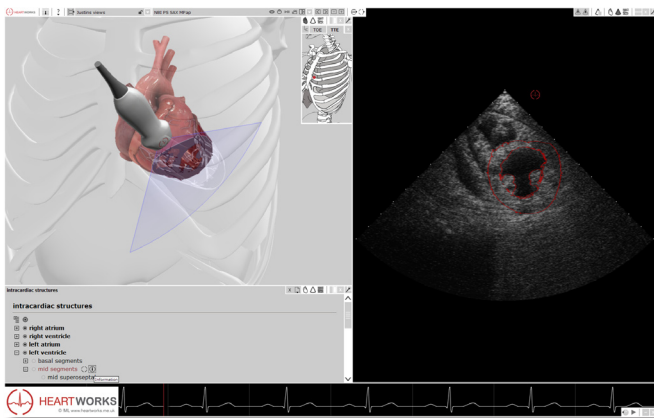
Transthoracic Echocardiography

This module allows real-time simulated TTE imaging of the virtual heart using a manikin. The life size manikin torso has soft skin with accurate, palpable anatomical landmarks to aid positioning of the handheld ultrasound probe.

The screen display allows the user to identify the position of the probe on the virtual chest as well as to see the orientation of the ultrasound plane.

The anatomy display includes a representation of the chest wall, ribs, sternum and spine as well as great vessels, lungs, pericardium, diaphragm and liver. These structures are displayed in the ultrasound view with realistic effects on cardiac imaging.

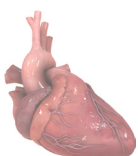
This package retains the virtual heart controls and features of the TEE and anatomy packages, along with the ability to generate 'slideshow' presentations.



“There is enormous demand for this type of skill in the field of intensive care, from cardiac physiology students to clinical practitioners. The inclusion of the HeartWorks simulation experience in our course will enable delegates to observe and safely practice skills for a day in a typical scenario before they go on to hone their skills in the peri-operative setting”

Dr Nick Fletcher

Consultant in Cardiothoracic Anaesthesia and Intensive Care
Honorary Senior Lecturer at St Georges Hospital, London, UK



HEARTWORKS
www.heartworks.me.uk

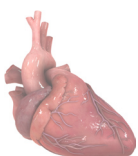
- Echocardiography Training Tool
- Developed by practising doctors
- Anatomically accurate 3D heart
- Real-time ultrasound simulation

!ML
INVENTIVE
MEDICAL Ltd.

Dual manikin package (TEE & TTE)

This package combines the anatomy, TEE and TTE packages with a single dual purpose manikin.

The TEE probe in this package is removable to enhance the realism of the simulated TEE procedure. The manikin may be positioned supine or at a 45° left lateral tilt to represent common scanning positions.



HEARTWORKS
www.heartworks.me.uk

- Echocardiography Training Tool
- Developed by practising doctors
- Anatomically accurate 3D heart
- Real-time ultrasound simulation

!ML
INVENTIVE
MEDICAL Ltd.

Additional HeartWorks Products

‘HeartWorks Plus’ Extended Support

‘HeartWorks Plus’ offers an enhanced level of support at the expiry of the first year warranty period. Starting at the beginning of year 2 ‘HeartWorks Plus’ can be extended to the end of year 5 and includes a scheduled ‘on site’ service and health check

HeartWorks Training

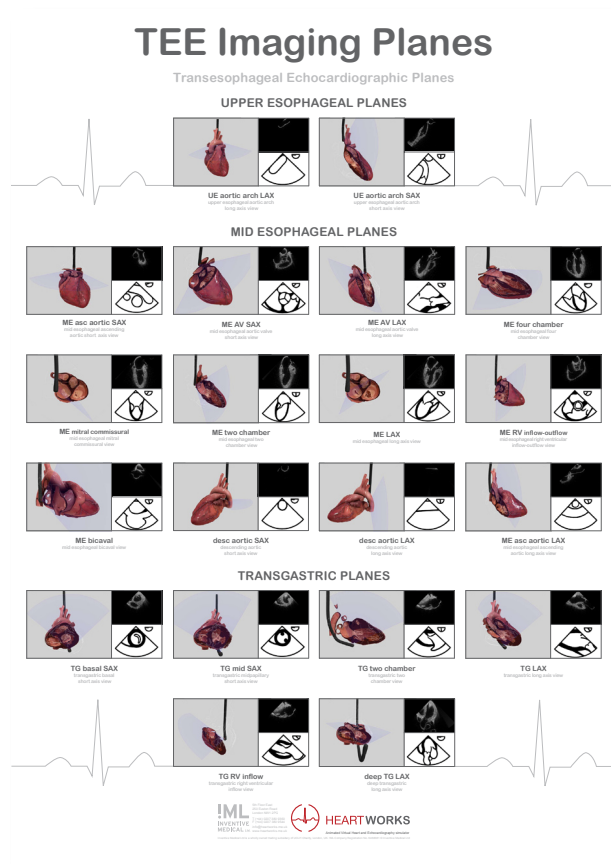
Additional training days can be delivered by qualified ‘HeartWorks’ staff at customer premises.

HeartWorks Images

High resolution still images of the HeartWorks virtual heart and simulated ultrasound are available for purchase on the HeartWorks website.

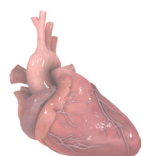
HeartWorks Video

High definition video clips of the animated heart and simulated ultrasound are also available on the HeartWorks website.



HeartWorks ‘TEE Imaging Planes’ Poster

A large poster (size B1, 1000mm X 707mm) of twenty standard TEE imaging planes is available on the website. The relative position of the probe to the heart, the corresponding ultrasound image and a line drawing of the TEE image are displayed for each imaging plane.



HEARTWORKS
www.heartworks.me.uk

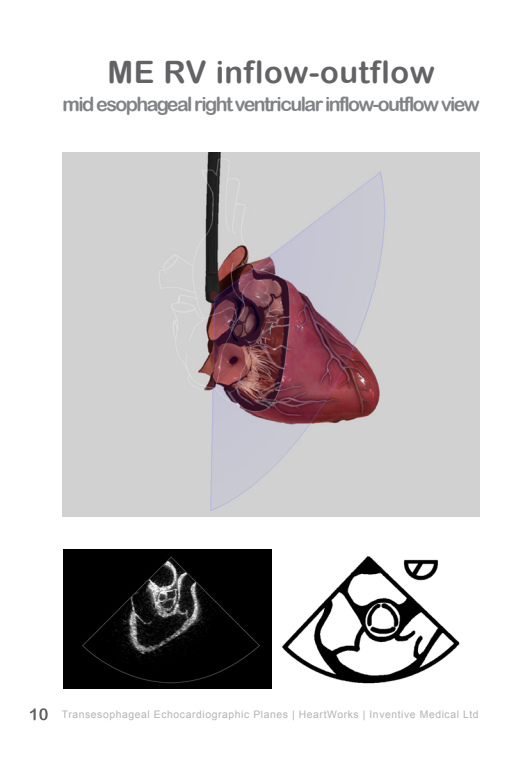
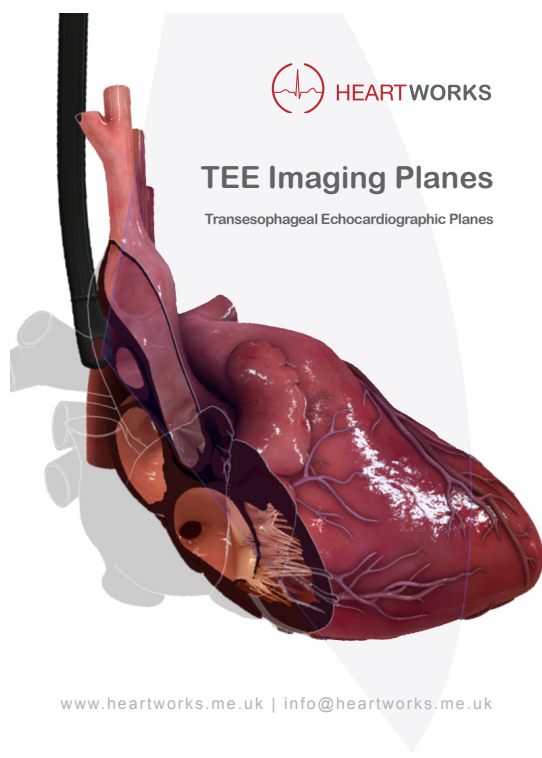
- Echocardiography Training Tool
- Developed by practising doctors
- Anatomically accurate 3D heart
- Real-time ultrasound simulation

IML
INVENTIVE
MEDICAL Ltd.

Additional HeartWorks Products *cont...*

HeartWorks 'TEE Imaging Planes' Booklet

Twenty TEE imaging planes, along with corresponding ultrasound images and line drawings, are also presented in an A6 (105mm X 148mm) booklet, providing students with a handy pocket size reference tool

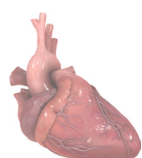


HeartWorks Laptop Computer

Existing owners of HeartWorks desktop systems can complement their HeartWorks facilities with a laptop version of the HeartWorks software. With the ability to display the HeartWorks image output via the laptop monitor or via an external screen projector, this addition greatly enhances the system's potential to support educational activities and lecture presentations at distant locations.

HeartWorks Travel Cases

Customised travel cases are available for the manikin, computer and screen. The cases have a lightweight and durable outer lining with fitted sponge inner lining. All cases have integrated wheels for easy transportation.



HEARTWORKS
www.heartworks.me.uk

- Echocardiography Training Tool
- Developed by practising doctors
- Anatomically accurate 3D heart
- Real-time ultrasound simulation

!ML
INVENTIVE
MEDICAL Ltd.

Detailed specifications

Anatomy Package

Hardware:

- High specification desktop computer with Intel based processor
- High-end graphics card
- Keyboard and mouse
- DVD+/-RW Drive
- High resolution (1920 x 1200) 24" Widescreen monitor

Software:

- HeartWorks freely manipulable virtual heart model with labels
- Anatomy textbook
- User manual

Transesophageal Echocardiography Package

Hardware:

- Includes Anatomy package hardware, plus:
- Fibreglass and soft rubber, latex free, torso manikin - 80cm x 48cm x 28cm
- Removable simulation TEE probe

Software:

- HeartWorks freely manipulable virtual heart model with labels
- Anatomy textbook
- User manual, plus:
- Ultrasound simulation package with both manikin, keyboard and mouse controlled TEE functions.

Transthoracic Echocardiography Package

Hardware:

- Includes Anatomy package hardware, plus:
- Fibreglass and soft rubber, latex free, torso manikin - 80cm x 48cm x 28cm
- Removable soft skin area and left lateral tilt mechanism
- Simulation TTE probe

Software:

- HeartWorks freely manipulable virtual heart model with labels
- Anatomy textbook
- User manual, plus:
- Ultrasound simulation package with manikin control of TTE functions

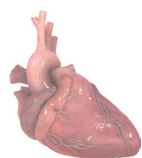
Transesophageal and Transthoracic Echocardiography combined Dual Manikin Package

Hardware:

- Includes Anatomy package hardware, plus:
- Fibreglass and soft rubber, latex free, torso manikin - 80cm x 48cm x 28cm
- Removable soft skin area and left lateral tilt mechanism
- Removable simulation TEE probe
- Simulation TTE probe

Software:

- HeartWorks freely manipulable virtual heart model with labels
- Anatomy textbook
- User manual, plus:
- Ultrasound simulation programme supporting both TEE and TTE functions.



HEARTWORKS
www.heartworks.me.uk

- Echocardiography Training Tool
- Developed by practising doctors
- Anatomically accurate 3D heart
- Real-time ultrasound simulation

!ML
INVENTIVE
MEDICAL Ltd.

Benefits of Purchasing and Using HeartWorks®

This document outlines some of the benefits that have been realised by customers from implementing the HeartWorks system.

Financial

- More efficient use of training resources
- Reduced training time
- Time-effective use of training facilities
- Ability to teach larger groups
- Ability to generate income from teaching/training using HeartWorks based training programs

Educational

- Improved learning and understanding of:
 - Echocardiography
 - Relationship between anatomy & echocardiography¹
- Improved practical skills acquisition¹
- Accelerated learning:
 - Reduced time to achieving competence¹
 - Reduced time demand on tutors
 - Improved ability to offer self-directed learning
- No dependence on operating schedule & clinical material availability:
 - Improved efficiency of training time usage
 - Improved ability to schedule training time
- Ability to create bespoke slideshows and teaching modules
 - Applicable to students at any level of training
 - Applicable to a broad spectrum of disciplines (medical, nursing, paramedical, technical, schoolchildren...)

Clinical

- Better informed clinical practice
 - Improved diagnostic ability of clinicians
 - Improved quality of patient care
- Ability to schedule training away from clinical area
- More clinical time spent 'patient' focussed rather than 'training' focussed

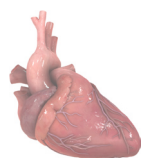
Risk

- Reduced risk of trauma to patient by unskilled practitioner
- Reduced patient complaint
- Reduced risk of distraction in clinical area (during teaching)
- Reduced infection risk (fewer personnel in clinical environment)

Additional

- Prestige with using innovative teaching methods & materials
- Enhancement of existing simulation facilities
- Enhanced institutional profile
- Increased attraction to potential student and tutor applicants
- Ability to access continued developments and upgrades in HeartWorks software & hardware

¹ Smith LA, Bhan A, Paul M, Monaghan MJ. Expert evaluation of a novel transoesophageal echocardiography simulator. Eur J Echocardiogr 2010, 11 (Suppl 2): P898



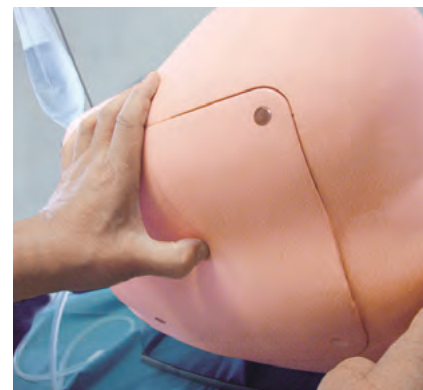
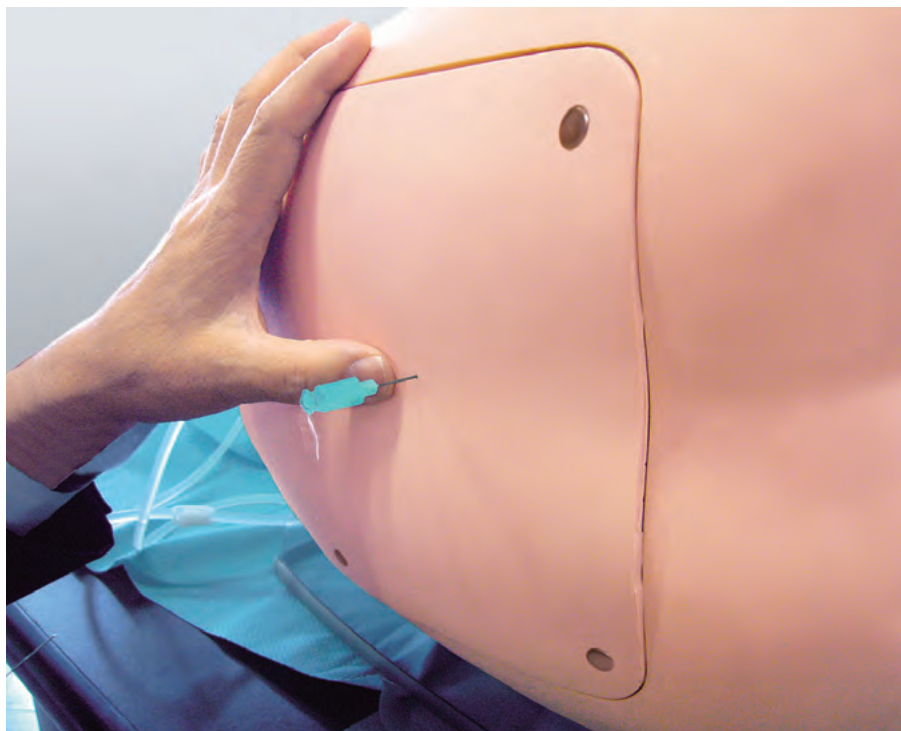
HEARTWORKS
www.heartworks.me.uk

- Echocardiography Training Tool
- Developed by practising doctors
- Anatomically accurate 3D heart
- Real-time ultrasound simulation

!ML
INVENTIVE
MEDICAL Ltd.

Lumbar Puncture Simulator II

The Lumbar Puncture Simulator has been designed by medical education experts to enhance formal LP procedural skills training and assessment. It allows students and medical professionals to practice frequently and achieve high levels of procedural competence without placing any patients at risk of harm.



Palpation of Landmarks



Lumbar Puncture and CSF collection

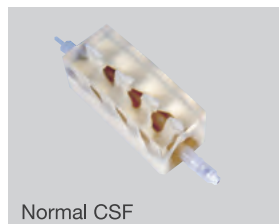
Production supervision:

Takahiro Amano, M.D.

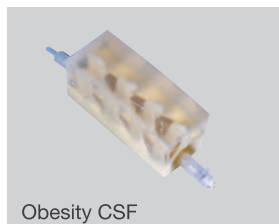
Professor and Director, Center for Postgraduate Medical Education International University of Health and Welfare Guest Professor, Keio University School of Medicine

- M43B model closely simulates the lumbar anatomy including the landmarks.
- Provides life-like sensation of both skin and tissue resistance to the spinal needle.
- Allows students to measure CSF fluid pressure, collect CSF fluid and epidural anesthesia procedures under clinically realistic conditions.
- Five types of puncture blocks enhance training with different levels of challenges.

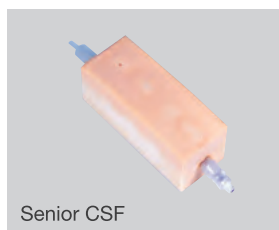
LP block



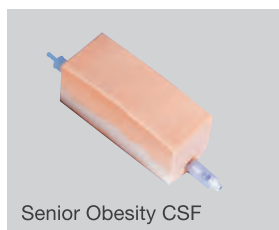
Normal CSF



Obesity CSF



Senior CSF

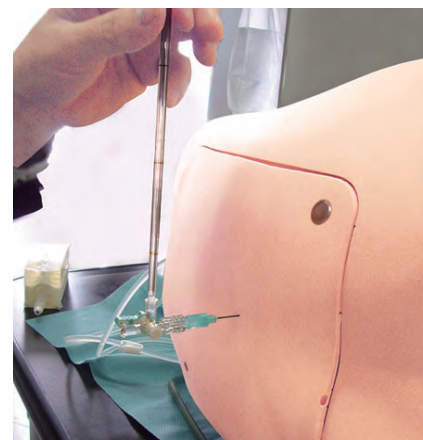


Senior Obesity CSF

Epidural block



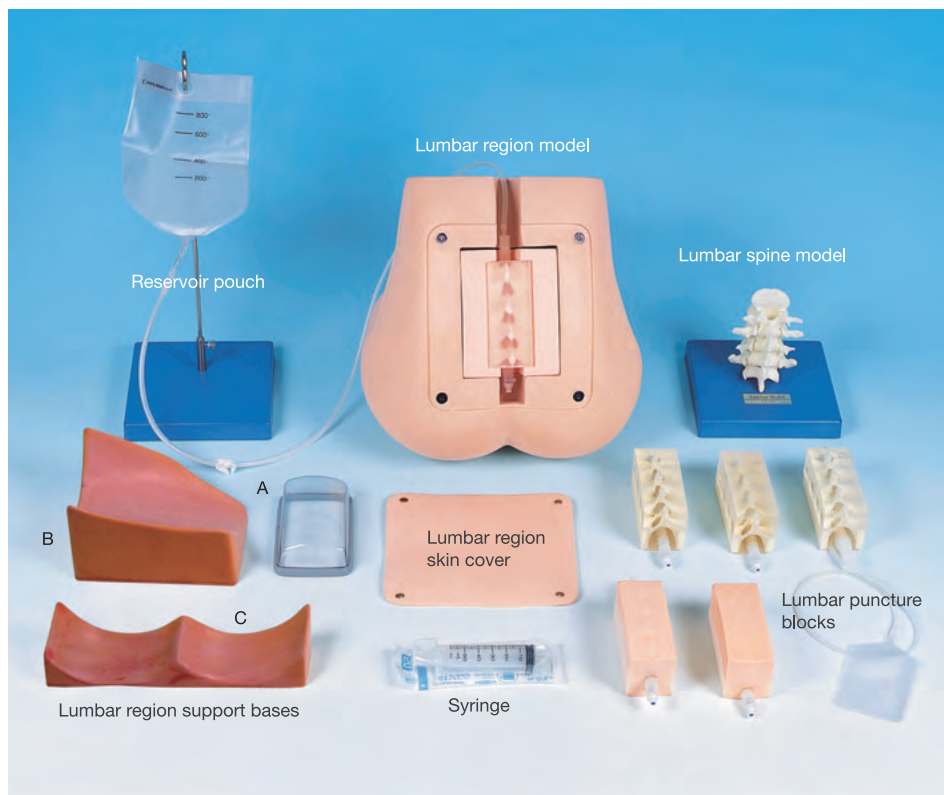
Epidural block with excellent needle-tip feeling. Loss-of-pressure technique with water or air can also be simulated.



CSF Pressure Measurement

KYOTO KAGAKU

15 Kitanekecho, Fushimi-ku,
Kyoto, 612-8388, JAPAN
Tel: +81-75-605-2510
Fax: +81-75-605-2519
www.kyotokagaku.com
rw-kyoto@kyotokagaku.co.jp



Lumbar region support bases for either individual or group practice



A Team Teaching



B Lateral Position



C Sitting Position

A separate anatomical model of the lumbar spine to facilitate anatomical understanding.

Transparent puncture blocks for direct observation of both the anatomy and the spinal needle path.

Three lumbar region support stands for either individual or team practice.

A thorough guidebook to the relevant anatomy, physiology, indications and performance of the lumbar puncture.

Included also is a guide to CSF fluid analysis and LP risk management.



The simulator reproduces the feel of a real lumbar puncture.



Lumbar spine model for facilitating anatomical understanding.

Lumbar Puncture Simulator II

M43B

Set includes:

- 1 lumbar region model
- 6 lumbar puncture blocks
 - 2 normal CSF, 1 obesity CSF, 1 senior CSF,
 - 1 senior obesity CSF, 1 epidural
- 1 lumbar region skin cover
- 3 lumbar region support bases:
 - sitting position, lateral position, team teaching
- 1 lumbar spine model
- 1 reservoir pouch, tube, support base and syringe
- 1 guidebook

manikin size: 37 x 34 x 23 H cm

packing size: 71 x 30 x 51 H cm, 14kg

Consumables and optional parts:

- 11348-090 LP block (normal CSF), 1 pc
- 11348-110 LP block (obesity CSF), 1 pc
- 11348-120 LP block (senior CSF), 1 pc
- 11348-130 LP block (senior obesity CSF), 1 pc
- 11348-140 epidural block, 1 pc
- 11348-150 lumbar region skin cover, 1 pc

Specifications are subject to change.

KYOTO KAGAKU

15 Kitanechoya-cho, Fushimi-ku,
Kyoto, 612-8388, JAPAN
Tel: +81-75-605-2510
Fax: +81-75-605-2519
www.kyotokagaku.com
rw-kyoto@kyotokagaku.co.jp



Take a closer look at SonoSite's new edge Ultrasound system

The Edge™ ultrasound system is SonoSite's fifth generation of point-of-care ultrasound. The screen is noticeably larger so you can see the ultrasound image from across the patient or across the room. Enhanced image quality aids your diagnostic confidence. A solid aluminium core helps to protect your investment for the long term. And a splash resistant silicone keyboard makes cleaning and disinfection that much easier. With the Edge ultrasound system, you have access to a new generation of point-of-care visualisation.

edge Technology from SonoSite

SonoHD2™ Second Generation Imaging Technology – provides a new series of image enhancement algorithms that reduce speckle noise and image artifacts to give the Edge ultrasound tool a new standard in point-of-care visualisation image quality.

SonoADAPT™ Tissue Optimisation – eliminating complicated manipulation of multiple controls.

SonoMB® Multi-beam Imaging – increasing resolution of small structures and enhancing border delineation.

Advanced Needle Visualisation – aiding needle visualisation while maintaining striking image quality of the target and surrounding anatomy.

ColorHD™ Technology – increasing colour performance, sensitivity and frame rates for more diagnostic information.

PoinT-of-care aPPlicaTions include:

Anaesthesia, Critical Care, Cardiology, Cardiovascular Disease Management, Emergency Medicine, Musculoskeletal, OB/Gyn, Radiology, Vascular, Surgery, Shared Service, Women's Health.



To learn more about our products contact us at **01462 444800** or visit www.sonosite.com/products/edge

edge™

designed for The Point-of-care



12.1"/30.7 cm LCD monitor

Large clinical image area

PC- and Mac-friendly for effortless data management with 2 high-speed USB 2.0 ports

3.85 kg/8.5 lbs. with battery

Backlit keyboard

Splash resistant keyboard for easy cleaning

Solid aluminum core



main feaTures aT a glance

- 12.1"/30.7 cm high resolution LCD
- A new level of image quality
- Large clinical image area
- Splash resistant, sealed, silicone keyboard
- Solid aluminium core and magnesium shell provides maximum durability



SonoSite Ltd

European Headquarters
Alexander House, 40A Wilbury Way, Hitchin, Herts SG4 0AP, United Kingdom
Tel: +44 1462-444800 Fax: +44 1462-444801 E-mail: europe@sonosite.com

www.sonosite.com/products/edge

SonoSite Worldwide Offices

SonoSite Australasia Pty Ltd – Australia
– New Zealand

SonoSite – Brazil
SonoSite Canada Inc. – Canada
SonoSite GmbH – Germany
SonoSite Iberica SL – Spain
SonoSite, Inc. – USA
SonoSite India Pvt Ltd – India
SonoSite Italy S.r.l. – Italy
SonoSite KK – Japan
SonoSite Ltd – China – Shanghai
SonoSite SARL – France

1300-663-516
0800-888-204
+55 61 8118 7100
+1 888-554-5502
+49 91-31-97-79-29-0
+34 91-640-49-11
+1 425 951-1200
+91 124-288-1100
+39 02-98490885
+81 3-5304-5337
+86 21-5239-6693
+33 1-69-18-96-30

Edge, SonoSite, the SonoSite logo, and other trademarks not owned by third parties are registered or unregistered intellectual property of SonoSite, Inc.